

(B) the number of Federal and State investigations, prosecutions, and convictions in the prior 12-month period related to child exploitation.

(Pub. L. 110–401, title I, § 106, Oct. 13, 2008, 122 Stat. 4238.)

#### REFERENCES IN TEXT

The Government Performance and Results Act, referred to in subsec. (d)(1), probably means the Government Performance and Results Act of 1993, Pub. L. 103–62, Aug. 3, 1993, 107 Stat. 285, which enacted section 306 of Title 5, Government Organization and Employees, sections 1115 to 1119, 9703, and 9704 of Title 31, Money and Finance, and sections 2801 to 2805 of Title 39, Postal Service, amended section 1105 of Title 31, and enacted provisions set out as notes under sections 1101 and 1115 of Title 31. For complete classification of this Act to the Code, see Short Title of 1993 Amendment note set out under section 1101 of Title 31 and Tables.

### § 17617. Authorization of appropriations

#### (a) In general

There are authorized to be appropriated to carry out this subchapter—

- (1) \$60,000,000 for fiscal year 2009;
- (2) \$60,000,000 for fiscal year 2010;
- (3) \$60,000,000 for fiscal year 2011;
- (4) \$60,000,000 for fiscal year 2012; and
- (5) \$60,000,000 for fiscal year 2013.

#### (b) Availability

Funds appropriated under subsection (a) shall remain available until expended.

(Pub. L. 110–401, title I, § 107, Oct. 13, 2008, 122 Stat. 4241.)

#### SUBCHAPTER II—ADDITIONAL MEASURES TO COMBAT CHILD EXPLOITATION

### § 17631. Additional regional computer forensic labs

#### (a) Additional resources

The Attorney General shall establish additional computer forensic capacity to address the current backlog for computer forensics, including for child exploitation investigations. The Attorney General may utilize funds under this subchapter to increase capacity at existing regional forensic laboratories or to add laboratories under the Regional Computer Forensic Laboratories Program operated by the Federal Bureau of Investigation.

#### (b) Purpose of new resources

The additional forensic capacity established by resources provided under this section shall be dedicated to assist Federal agencies, State and local Internet Crimes Against Children task forces, and other Federal, State, and local law enforcement agencies in preventing, investigating, and prosecuting Internet crimes against children.

#### (c) New computer forensic labs

If the Attorney General determines that new regional computer forensic laboratories are required under subsection (a) to best address existing backlogs, such new laboratories shall be established pursuant to subsection (d).

#### (d) Location of new labs

The location of any new regional computer forensic laboratories under this section shall be

determined by the Attorney General, in consultation with the Director of the Federal Bureau of Investigation, the Regional Computer Forensic Laboratory National Steering Committee, and other relevant stakeholders.

#### (e) Report

Not later than 1 year after October 13, 2008, and every year thereafter, the Attorney General shall submit a report to the Congress on how the funds appropriated under this section were utilized.

#### (f) Authorization of appropriations

There are authorized to be appropriated for fiscal years 2009 through 2013, \$2,000,000 to carry out the provisions of this section.

(Pub. L. 110–401, title II, § 201, Oct. 13, 2008, 122 Stat. 4241.)

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**§ 17701. Findings**

The Congress finds, on this, the 50th anniversary of the establishment of the National Aeronautics and Space Administration, the following:

(1) NASA is and should remain a multi-mission agency with a balanced and robust set of core missions in science, aeronautics, and human space flight and exploration.

(2) Investment in NASA's programs will promote innovation through research and development, and will improve the competitiveness of the United States.

(3) Investment in NASA's programs, like investments in other Federal science and technology activities, is an investment in our future.

(4) Properly structured, NASA's activities can contribute to an improved quality of life, economic vitality, United States leadership in peaceful cooperation with other nations on challenging undertakings in science and technology, national security, and the advancement of knowledge.

(5) NASA should assume a leadership role in a cooperative international Earth observations and research effort to address key research issues associated with climate change and its impacts on the Earth system.

(6) NASA should undertake a program of aeronautical research, development, and where appropriate demonstration activities with the overarching goals of—

(A) ensuring that the Nation's future air transportation system can handle up to 3 times the current travel demand and incorporate new vehicle types with no degradation in safety or adverse environmental impact on local communities;

(B) protecting the environment;

(C) promoting the security of the Nation; and

(D) retaining the leadership of the United States in global aviation.

(7) Human and robotic exploration of the solar system will be a significant long-term undertaking of humanity in the 21st century

and beyond, and it is in the national interest that the United States should assume a leadership role in a cooperative international exploration initiative.

(8) Developing United States human space flight capabilities to allow independent American access to the International Space Station, and to explore beyond low Earth orbit, is a strategically important national imperative, and all prudent steps should thus be taken to bring the Orion Crew Exploration Vehicle and Ares I Crew Launch Vehicle to full operational capability as soon as possible and to ensure the effective development of a United States heavy lift launch capability for missions beyond low Earth orbit.

(9) NASA's scientific research activities have contributed much to the advancement of knowledge, provided societal benefits, and helped train the next generation of scientists and engineers, and those activities should continue to be an important priority.

(10) NASA should make a sustained commitment to a robust long-term technology development activity. Such investments represent the critically important "seed corn" on which NASA's ability to carry out challenging and productive missions in the future will depend.

(11) NASA, through its pursuit of challenging and relevant activities, can provide an important stimulus to the next generation to pursue careers in science, technology, engineering, and mathematics.

(12) Commercial activities have substantially contributed to the strength of both the United States space program and the national economy, and the development of a healthy and robust United States commercial space sector should continue to be encouraged.

(13) It is in the national interest for the United States to have an export control policy that protects the national security while also enabling the United States aerospace industry to compete effectively in the global market place and the United States to undertake cooperative programs in science and human space flight in an effective and efficient manner.

(Pub. L. 110-422, § 2, Oct. 15, 2008, 122 Stat. 4781.)

## SHORT TITLE

Pub. L. 110-422, § 1(a), Oct. 15, 2008, 122 Stat. 4779, provided that: "This Act [enacting this chapter, amending sections 2459f-1, 2459j, 16727, and 16761 of this title, and section 8905a of Title 5, Government Organization and Employees, and enacting provisions set out as a note under section 2459f-1 of this title] may be cited as the 'National Aeronautics and Space Administration Authorization Act of 2008'."

**§ 17702. Definitions**

In this chapter:

**(1) Administrator**

The term "Administrator" means the Administrator of NASA.

**(2) NASA**

The term "NASA" means the National Aeronautics and Space Administration.

**(3) NOAA**

The term "NOAA" means the National Oceanic and Atmospheric Administration.

**(4) OSTP**

The term “OSTP” means the Office of Science and Technology Policy.

(Pub. L. 110–422, §3, Oct. 15, 2008, 122 Stat. 4782.)

## REFERENCES IN TEXT

This chapter, referred to in text, was in the original “this Act”, meaning Pub. L. 110–422, Oct. 15, 2008, 122 Stat. 4779, which is classified principally to this chapter. For complete classification of this Act to the Code, see Short Title note set out under section 17701 of this title and Tables.

## SUBCHAPTER I—EARTH SCIENCE

**§ 17711. Goal**

The goal for NASA’s Earth Science program shall be to pursue a program of Earth observations, research, and applications activities to better understand the Earth, how it supports life, and how human activities affect its ability to do so in the future. In pursuit of this goal, NASA’s Earth Science program shall ensure that securing practical benefits for society will be an important measure of its success in addition to securing new knowledge about the Earth system and climate change. In further pursuit of this goal, NASA shall, together with NOAA and other relevant agencies, provide United States leadership in developing and carrying out a cooperative international Earth observations-based research program.

(Pub. L. 110–422, title II, §201, Oct. 15, 2008, 122 Stat. 4784.)

**§ 17712. Transitioning experimental research into operational services****(a) Sense of Congress**

It is the sense of the Congress that experimental NASA sensors and missions that have the potential to benefit society if transitioned into operational monitoring systems be transitioned into operational status whenever possible.

**(b) Interagency process**

The Director of OSTP, in consultation with the Administrator, the Administrator of NOAA, and other relevant stakeholders, shall develop a process to transition, when appropriate, NASA Earth science and space weather missions or sensors into operational status. The process shall include coordination of annual agency budget requests as required to execute the transitions.

**(c) Responsible agency official**

The Administrator and the Administrator of NOAA shall each designate an agency official who shall have the responsibility for and authority to lead NASA’s and NOAA’s transition activities and interagency coordination.

**(d) Plan**

For each mission or sensor that is determined to be appropriate for transition under subsection (b), NASA and NOAA shall transmit to Congress a joint plan for conducting the transition. The plan shall include the strategy, milestones, and budget required to execute the transition. The transition plan shall be transmitted

to Congress not later than 60 days after the successful completion of the mission or sensor critical design review.

(Pub. L. 110–422, title II, §204, Oct. 15, 2008, 122 Stat. 4785.)

**§ 17713. Reauthorization of Glory Mission****(a) Reauthorization**

Congress reauthorizes NASA to continue with development of the Glory Mission, which will examine how aerosols and solar energy affect the Earth’s climate.

**(b) Baseline Report**

Pursuant to the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155) [42 U.S.C. 16601 et seq.], not later than 90 days after October 15, 2008, the Administrator shall transmit a new baseline report consistent with section 103(b)(2) of such Act [42 U.S.C. 16613(b)(2)]. The report shall include an analysis of the factors contributing to cost growth and the steps taken to address them.

(Pub. L. 110–422, title II, §206, Oct. 15, 2008, 122 Stat. 4785.)

## REFERENCES IN TEXT

The National Aeronautics and Space Administration Authorization Act of 2005, referred to in subsec. (b), is Pub. L. 109–155, Dec. 30, 2005, 119 Stat. 2895, which is classified principally to chapter 150 (§16601 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 16601 of this title and Tables.

**§ 17714. Tornadoes and other severe storms**

The Administrator shall ensure that NASA gives high priority to those parts of its existing cooperative activities with NOAA that are related to the study of tornadoes and other severe storms, tornado-force winds, and other factors determined to influence the development of tornadoes and other severe storms, with the goal of improving the Nation’s ability to predict tornadoes and other severe storms. Further, the Administrator shall examine whether there are additional cooperative activities with NOAA that should be undertaken in the area of tornado and severe storm research.

(Pub. L. 110–422, title II, §208, Oct. 15, 2008, 122 Stat. 4786.)

## SUBCHAPTER II—AERONAUTICS

**§ 17721. Environmentally friendly aircraft research and development initiative**

The Administrator shall establish an initiative involving NASA, universities, industry, and other research organizations as appropriate, of research, development, and demonstration, in a relevant environment, of technologies to enable the following commercial aircraft performance characteristics:

- (1) Noise levels on takeoff and on airport approach and landing that do not exceed ambient noise levels in the absence of flight operations in the vicinity of airports from which such commercial aircraft would normally operate, without increasing energy consumption or nitrogen oxide emissions compared to air-

craft in commercial service as of October 15, 2008.

(2) Significant reductions in greenhouse gas emissions compared to aircraft in commercial services as of October 15, 2008.

(Pub. L. 110-422, title III, §302, Oct. 15, 2008, 122 Stat. 4786.)

#### **§ 17722. Research alignment**

In addition to pursuing the research and development initiative described in section 17721 of this title, the Administrator shall, to the maximum extent practicable within available funding, align the fundamental aeronautics research program to address high priority technology challenges of the National Academies' Decadal Survey of Civil Aeronautics, and shall work to increase the degree of involvement of external organizations, and especially of universities, in the fundamental aeronautics research program.

(Pub. L. 110-422, title III, §303, Oct. 15, 2008, 122 Stat. 4787.)

#### **§ 17723. Research program to determine perceived impact of sonic booms**

##### **(a) In general**

The ability to fly commercial aircraft over land at supersonic speeds without adverse impacts on the environment or on local communities would open new markets and enable new transportation capabilities. In order to have the basis for establishing appropriate sonic boom standards for such flight operations, a research program is needed to assess the impact in a relevant environment of commercial supersonic flight operations.

##### **(b) Establishment**

The Administrator shall establish a cooperative research program with industry, including the conduct of flight demonstrations in a relevant environment, to collect data on the perceived impact of sonic booms. The data could enable the promulgation of appropriate standards for overland commercial supersonic flight operations.

##### **(c) Coordination**

The Administrator shall ensure that sonic boom research is coordinated as appropriate with the Administrator of the Federal Aviation Administration, and as appropriate make use of the expertise of the Partnership for Air Transportation Noise and Emissions Reduction Center of Excellence sponsored by NASA and the Federal Aviation Administration.

(Pub. L. 110-422, title III, §304, Oct. 15, 2008, 122 Stat. 4787.)

#### **§ 17724. Funding for research and development activities in support of other mission directorates**

Research and development activities performed by the Aeronautics Research Mission Directorate with the primary objective of assisting in the development of a flight project in another Mission Directorate shall be funded by the Mission Directorate seeking assistance.

(Pub. L. 110-422, title III, §307, Oct. 15, 2008, 122 Stat. 4788.)

### **SUBCHAPTER III—EXPLORATION INITIATIVE**

#### **§ 17731. Stepping stone approach to exploration**

In order to maximize the cost-effectiveness of the long-term exploration and utilization activities of the United States, the Administrator shall take all necessary steps, including engaging international partners, to ensure that activities in its lunar exploration program shall be designed and implemented in a manner that gives strong consideration to how those activities might also help meet the requirements of future exploration and utilization activities beyond the Moon. The timetable of the lunar phase of the long-term international exploration initiative shall be determined by the availability of funding. However, once an exploration-related project enters its development phase, the Administrator shall seek, to the maximum extent practicable, to complete that project without undue delays.

(Pub. L. 110-422, title IV, §403, Oct. 15, 2008, 122 Stat. 4789.)

#### **§ 17732. Lunar outpost**

##### **(a) Establishment**

As NASA works toward the establishment of a lunar outpost, NASA shall make no plans that would require a lunar outpost to be occupied to maintain its viability. Any such outpost shall be operable as a human-tended facility capable of remote or autonomous operation for extended periods.

##### **(b) Designation**

The United States portion of the first human-tended outpost established on the surface of the Moon shall be designated the "Neil A. Armstrong Lunar Outpost".

##### **(c) Sense of Congress**

It is the sense of Congress that NASA should make use of commercial services to the maximum extent practicable in support of its lunar outpost activities.

(Pub. L. 110-422, title IV, §404, Oct. 15, 2008, 122 Stat. 4789.)

#### **§ 17733. Exploration technology development**

##### **(a) In general**

A robust program of long-term exploration-related technology research and development will be essential for the success and sustainability of any enduring initiative of human and robotic exploration of the solar system.

##### **(b) Establishment**

The Administrator shall carry out a program of long-term exploration-related technology research and development, including such things as in-space propulsion, power systems, life support, and advanced avionics, that is not tied to specific flight projects. The program shall have the funding goal of ensuring that the technology research and development can be completed in a timely manner in order to support the safe, successful, and sustainable exploration of the solar system. In addition, in order to ensure that the

broadest range of innovative concepts and technologies are captured, the long-term technology program shall have the goal of having a significant portion of its funding available for external grants and contracts with universities, research institutions, and industry.

(Pub. L. 110-422, title IV, § 405, Oct. 15, 2008, 122 Stat. 4789.)

#### **§ 17734. Exploration crew rescue**

In order to maximize the ability to rescue astronauts whose space vehicles have become disabled, the Administrator shall enter into discussions with the appropriate representatives of spacefaring nations who have or plan to have crew transportation systems capable of orbital flight or flight beyond low Earth orbit for the purpose of agreeing on a common docking system standard.

(Pub. L. 110-422, title IV, § 407, Oct. 15, 2008, 122 Stat. 4790.)

### **SUBCHAPTER IV—SPACE SCIENCE**

#### **§ 17741. Technology development**

The Administrator shall establish an intra-Directorate long-term technology development program for space and Earth science within the Science Mission Directorate for the development of new technology. The program shall be independent of the flight projects under development. NASA shall have a goal of funding the intra-Directorate technology development program at a level of 5 percent of the total Science Mission Directorate annual budget. The program shall be structured to include competitively awarded grants and contracts.

(Pub. L. 110-422, title V, § 501, Oct. 15, 2008, 122 Stat. 4791.)

#### **§ 17742. Provision for future servicing of observatory-class scientific spacecraft**

The Administrator shall take all necessary steps to ensure that provision is made in the design and construction of all future observatory-class scientific spacecraft intended to be deployed in Earth orbit or at a Lagrangian point in space for robotic or human servicing and repair to the extent practicable and appropriate.

(Pub. L. 110-422, title V, § 502, Oct. 15, 2008, 122 Stat. 4791.)

### **SUBCHAPTER V—SPACE OPERATIONS**

#### **PART A—INTERNATIONAL SPACE STATION**

#### **§ 17751. Plan to support operation and utilization of the ISS beyond fiscal year 2015**

##### **(a) In general**

The Administrator shall take all necessary steps to ensure that the International Space Station remains a viable and productive facility capable of potential United States utilization through at least 2020 and shall take no steps that would preclude its continued operation and utilization by the United States after 2015.

##### **(b) Plan to support operations and utilization of the International Space Station beyond fiscal year 2015**

###### **(1) In general**

Not later than 9 months after October 15, 2008, the Administrator shall submit to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan to support the operations and utilization of the International Space Station beyond fiscal year 2015 for a period of not less than 5 years. The plan shall be an update and expansion of the operation plan of the International Space Station National Laboratory submitted to Congress in May 2007 under section 16767 of this title.

###### **(2) Content**

###### **(A) Requirements to support operation and utilization of the ISS beyond fiscal year 2015**

As part of the plan required in paragraph (1), the Administrator shall provide each of the following:

(i) A list of critical hardware necessary to support International Space Station operations through the year 2020.

(ii) Specific known or anticipated maintenance actions that would need to be performed to support International Space Station operations and research through the year 2020.

(iii) Annual upmass and downmass requirements, including potential vehicles that will deliver such upmass and downmass, to support the International Space Station after the retirement of the Space Shuttle and through the year 2020.

###### **(B) ISS National Laboratory Research Management Plan**

As part of the plan required in paragraph (1), the Administrator shall develop a Research Management Plan for the International Space Station. Such Plan shall include a process for selecting and prioritizing research activities (including fundamental, applied, commercial, and other research) for flight on the International Space Station. Such Plan shall be used to prioritize resources such as crew time, racks and equipment, and United States access to international research facilities and equipment. Such Plan shall also identify the organization to be responsible for managing United States research on the International Space Station, including a description of the relationship of the management institution with NASA (e.g., internal NASA office, contract, cooperative agreement, or grant), the estimated length of time for the arrangement, and the budget required to support the management institution. Such Plan shall be developed in consultation with other Federal agencies, academia, industry, and other relevant stakeholders. The Administrator may request the support of the National Academy of Sciences or other appropriate independent entity, including an external consultant, in developing the Plan.

**(C) Establishment of process for access to National Laboratory**

As part of the plan required in paragraph (1), the Administrator shall—

(i) establish a process by which to support International Space Station National Laboratory users in identifying their requirements for transportation of research supplies to and from the International Space Station, and for communicating those requirements to NASA and International Space Station transportation services providers; and

(ii) develop an estimate of the transportation requirements needed to support users of the International Space Station National Laboratory and develop a plan for satisfying those requirements by dedicating a portion of volume on NASA supply missions to the International Space Station.

**(D) Assessment of equipment to support research**

As part of the plan required in paragraph (1), the Administrator shall—

(i) provide a list of critical hardware that is anticipated to be necessary to support nonexploration-related and exploration-related research through the year 2020;

(ii) identify existing research equipment and racks and support equipment that are manifested for flight; and

(iii) provide a detailed description of the status of research equipment and facilities that were completed or in development prior to being cancelled, and provide the budget and milestones for completing and preparing the equipment for flight on the International Space Station.

**(E) Budget plan**

As part of the plan required in paragraph (1), the Administrator shall provide a budget plan that reflects the anticipated use of such activities and the projected amounts to be required for fiscal years 2010 through 2020 to accomplish the objectives of the activities described in subparagraphs (A) through (D).

(Pub. L. 110-422, title VI, § 601, Oct. 15, 2008, 122 Stat. 4793.)

**§ 17752. International Space Station National Laboratory Advisory Committee**

**(a) Establishment**

Not later than 1 year after October 15, 2008, the Administrator shall establish under the Federal Advisory Committee Act [5 U.S.C. App.] a committee to be known as the “International Space Station National Laboratory Advisory Committee” (hereafter in this section referred to as the “Committee”).

**(b) Membership**

**(1) Composition**

The Committee shall be composed of individuals representing organizations who have formal agreements with NASA to utilize the United States portion of the International

Space Station, including allocations within partner elements.

**(2) Chair**

The Administrator shall appoint a chair from among the members of the Committee, who shall serve for a 2-year term.

**(c) Duties of the Committee**

**(1) In general**

The Committee shall monitor, assess, and make recommendations regarding effective utilization of the International Space Station as a national laboratory and platform for research.

**(2) Annual report**

The Committee shall submit to the Administrator, on an annual basis or more frequently as considered necessary by a majority of the members of the Committee, a report containing the assessments and recommendations required by paragraph (1).

**(d) Duration**

The Committee shall exist for the life of the International Space Station.

(Pub. L. 110-422, title VI, § 602, Oct. 15, 2008, 122 Stat. 4795.)

REFERENCES IN TEXT

The Federal Advisory Committee Act, referred to in subsec. (a), is Pub. L. 92-463, Oct. 6, 1972, 86 Stat. 770, which is set out in the Appendix to Title 5, Government Organization and Employees.

**§ 17753. Contingency plan for cargo resupply**

**(a) In general**

The International Space Station represents a significant investment of national resources, and it is a facility that embodies a cooperative international approach to the exploration and utilization of space. As such, it is important that its continued viability and productivity be ensured, to the maximum extent possible, after the Space Shuttle is retired.

**(b) Contingency plan**

The Administrator shall develop a contingency plan and arrangements, including use of International Space Station international partner cargo resupply capabilities, to ensure the continued viability and productivity of the International Space Station in the event that United States commercial cargo resupply services are not available during any extended period after the date that the Space Shuttle is retired. The plan shall be delivered to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than one year after October 15, 2008.

(Pub. L. 110-422, title VI, § 603, Oct. 15, 2008, 122 Stat. 4796.)

PART B—SPACE SHUTTLE

**§ 17761. Space Shuttle transition**

**(a) Disposition of shuttle-related assets**

**(1) In general**

Not later than 90 days after October 15, 2008, the Administrator shall submit to Congress a

plan describing the process for the disposition of the remaining Space Shuttle Orbiters and other Space Shuttle program-related hardware after the retirement of the Space Shuttle fleet.

**(2) Plan requirements**

The plan submitted under paragraph (1) shall include a description of a process by which educational institutions, science museums, and other appropriate organizations may acquire, through loan or disposal by the Federal Government, Space Shuttle program hardware.

**(3) Prohibition on disposition before completion of plan**

The Administrator shall not dispose of any Space Shuttle program hardware before the plan required by paragraph (1) is submitted to Congress.

**(b) Space Shuttle Transition Liaison Office**

**(1) Establishment**

The Administrator shall develop a plan and establish a Space Shuttle Transition Liaison Office within the Office of Human Capital Management of NASA to assist local communities affected by the termination of the Space Shuttle program in mitigating the negative impacts on such communities caused by such termination. The plan shall define the size of the affected local community that would receive assistance described in paragraph (2).

**(2) Manner of assistance**

In providing assistance under paragraph (1), the office established under such paragraph shall—

(A) offer nonfinancial, technical assistance to communities described in such paragraph to assist in the mitigation described in such paragraph; and

(B) serve as a clearinghouse to assist such communities in identifying services available from other Federal, State, and local agencies to assist in such mitigation.

**(3) Termination of office**

The office established under paragraph (1) shall terminate 2 years after the completion of the last Space Shuttle flight.

**(4) Submission**

Not later than 180 days after October 15, 2008, NASA shall provide a copy of the plan required by paragraph (1) to the Congress.

(Pub. L. 110-422, title VI, § 613, Oct. 15, 2008, 122 Stat. 4799.)

PART C—LAUNCH SERVICES

**§ 17771. Launch Services strategy**

**(a) In general**

In preparation for the award of contracts to follow up on the current NASA Launch Services (NLS) contracts, the Administrator shall develop a strategy for providing domestic commercial launch services in support of NASA's small and medium-sized Science, Space Operations, and Exploration missions, consistent with current law and policy.

**(b) Report**

The Administrator shall transmit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the strategy developed under subsection (a) not later than 90 days after October 15, 2008. The report shall provide, at a minimum—

(1) the results of the Request for Information on small to medium-sized launch services released on April 22, 2008;

(2) an analysis of possible alternatives to maintain small and medium-sized lift capabilities after June 30, 2010, including the use of the Department of Defense's Evolved Expendable Launch Vehicle (EELV);

(3) the recommended alternatives, and associated 5-year budget plans starting in October 2010 that would enable their implementation; and

(4) a contingency plan in the event the recommended alternatives described in paragraph (3) are not available when needed.

(Pub. L. 110-422, title VI, § 621, Oct. 15, 2008, 122 Stat. 4801.)

SUBCHAPTER VI—EDUCATION

**§ 17781. Enhancement of educational role of NASA**

**(a) Sense of Congress**

It is the sense of Congress that the International Space Station offers a unique opportunity for Federal agencies to engage students in science, technology, engineering, and mathematics education. Congress encourages NASA to include other Federal agencies in its planning efforts to use the International Space Station National Laboratory for science, technology, engineering, and mathematics educational activities.

**(b) Experimental program to stimulate competitive research**

In order to ensure that research expertise and talent throughout the Nation is<sup>1</sup> developed and engaged in NASA research and education activities, NASA shall, as part of its annual budget submission, detail additional steps that can be taken to further integrate the participating EPSCoR States in both existing and new or emerging NASA research programs and center activities.

**(c) National space grant college and fellowship program**

NASA shall continue its emphasis on the importance of education to expand opportunities for Americans to understand and participate in NASA's aeronautics and space projects by supporting and enhancing science and engineering education, research, and public outreach efforts.

(Pub. L. 110-422, title VII, § 704, Oct. 15, 2008, 122 Stat. 4802.)

<sup>1</sup> So in original. Probably should be "are".

## SUBCHAPTER VII—NEAR-EARTH OBJECTS

**§ 17791. Reaffirmation of policy****(a) Reaffirmation of policy on surveying near-Earth asteroids and comets**

Congress reaffirms the policy set forth in section 2451(g) of this title (relating to surveying near-Earth asteroids and comets).

**(b) Sense of Congress on benefits of near-Earth object program activities**

It is the sense of Congress that the near-Earth object program activities of NASA will provide benefits to the scientific and exploration activities of NASA.

(Pub. L. 110-422, title VIII, § 801, Oct. 15, 2008, 122 Stat. 4803.)

**§ 17792. Findings**

Congress makes the following findings:

(1) Near-Earth objects pose a serious and credible threat to humankind, as many scientists believe that a major asteroid or comet was responsible for the mass extinction of the majority of the Earth's species, including the dinosaurs, nearly 65,000,000 years ago.

(2) Several such near-Earth objects have only been discovered within days of the objects' closest approach to Earth and recent discoveries of such large objects indicate that many large near-Earth objects remain undiscovered.

(3) Asteroid and comet collisions rank as one of the most costly natural disasters that can occur.

(4) The time needed to eliminate or mitigate the threat of a collision of a potentially hazardous near-Earth object with Earth is measured in decades.

(5) Unlike earthquakes and hurricanes, asteroids and comets can provide adequate collision information, enabling the United States to include both asteroid-collision and comet-collision disaster recovery and disaster avoidance in its public-safety structure.

(6) Basic information is needed for technical and policy decisionmaking for the United States to create a comprehensive program in order to be ready to eliminate and mitigate the serious and credible threats to humankind posed by potentially hazardous near-Earth asteroids and comets.

(7) As a first step to eliminate and to mitigate the risk of such collisions, situation and decision analysis processes, as well as procedures and system resources, must be in place well before a collision threat becomes known.

(Pub. L. 110-422, title VIII, § 802, Oct. 15, 2008, 122 Stat. 4803.)

**§ 17793. Requests for information**

The Administrator shall issue requests for information on—

(1) a low-cost space mission with the purpose of rendezvousing with, attaching a tracking device,<sup>1</sup> and characterizing the Apophis asteroid; and

<sup>1</sup> So in original. The comma probably should be preceded by "to".

(2) a medium-sized space mission with the purpose of detecting near-Earth objects equal to or greater than 140 meters in diameter.

(Pub. L. 110-422, title VIII, § 803, Oct. 15, 2008, 122 Stat. 4803.)

**§ 17794. Establishment of policy with respect to threats posed by near-Earth objects**

Within 2 years after October 15, 2008, the Director of the OSTP shall—

(1) develop a policy for notifying Federal agencies and relevant emergency response institutions of an impending near-Earth object threat, if near-term public safety is at risk; and

(2) recommend a Federal agency or agencies to be responsible for—

(A) protecting the United States from a near-Earth object that is expected to collide with Earth; and

(B) implementing a deflection campaign, in consultation with international bodies, should one be necessary.

(Pub. L. 110-422, title VIII, § 804, Oct. 15, 2008, 122 Stat. 4804.)

**§ 17795. Planetary radar capability**

The Administrator shall maintain a planetary radar that is comparable to the capability provided through the Deep Space Network Goldstone facility of NASA.

(Pub. L. 110-422, title VIII, § 805, Oct. 15, 2008, 122 Stat. 4804.)

## SUBCHAPTER VIII—COMMERCIAL INITIATIVES

**§ 17801. Commercial crew initiative****(a) In general**

In order to stimulate commercial use of space, help maximize the utility and productivity of the International Space Station, and enable a commercial means of providing crew transfer and crew rescue services for the International Space Station, NASA shall—

(1) make use of United States commercially provided International Space Station crew transfer and crew rescue services to the maximum extent practicable, if those commercial services have demonstrated the capability to meet NASA-specified ascent, entry, and International Space Station proximity operations safety requirements;

(2) limit, to the maximum extent practicable, the use of the Crew Exploration Vehicle to missions carrying astronauts beyond low Earth orbit once commercial crew transfer and crew rescue services that meet safety requirements become operational;

(3) facilitate, to the maximum extent practicable, the transfer of NASA-developed technologies to potential United States commercial crew transfer and rescue service providers, consistent with United States law; and

(4) issue a notice of intent, not later than 180 days after October 15, 2008, to enter into a funded, competitively awarded Space Act Agreement with 2 or more commercial entities for a Phase 1 Commercial Orbital Transpor-



tation Services crewed vehicle demonstration program.

**(b) Congressional intent**

It is the intent of Congress that funding for the program described in subsection (a)(4) shall not come at the expense of full funding of the amounts authorized under section 101(3)(A),<sup>1</sup> and for future fiscal years, for Orion Crew Exploration Vehicle development, Ares I Crew Launch Vehicle development, or International Space Station cargo delivery.

**(c) Additional technologies**

NASA shall make International Space Station-compatible docking adaptors and other relevant technologies available to the commercial crew providers selected to service the International Space Station.

**(d) Crew transfer and crew rescue services contract**

If a commercial provider demonstrates the capability to provide International Space Station crew transfer and crew rescue services and to satisfy NASA ascent, entry, and International Space Station proximity operations safety requirements, NASA shall enter into an International Space Station crew transfer and crew rescue services contract with that commercial provider for a portion of NASA's anticipated International Space Station crew transfer and crew rescue requirements from the time the commercial provider commences operations under contract with NASA through calendar year 2016, with an option to extend the period of performance through calendar year 2020.

(Pub. L. 110-422, title IX, § 902, Oct. 15, 2008, 122 Stat. 4805.)

REFERENCES IN TEXT

Section 101(3)(A), referred to in subsec. (b), is section 101(3)(A) of Pub. L. 110-422, title I, Oct. 15, 2008, 122 Stat. 4783, which is not classified to the Code.

SUBCHAPTER IX—REVITALIZATION OF  
NASA INSTITUTIONAL CAPABILITIES

**§ 17811. Maintenance and upgrade of Center facilities**

**(a) In general**

In order to sustain healthy Centers that are capable of carrying out NASA's missions, the Administrator shall ensure that adequate maintenance and upgrading of those Center facilities is performed on a regular basis.

**(b) Review**

The Administrator shall determine and prioritize the maintenance and upgrade backlog at each of NASA's Centers and associated facilities, and shall develop a strategy and budget plan to reduce that maintenance and upgrade backlog by 50 percent over the next five years.

**(c) Report**

The Administrator shall deliver a report to Congress on the results of the activities undertaken in subsection (b) concurrently with the delivery of the fiscal year 2011 budget request.

(Pub. L. 110-422, title X, § 1002, Oct. 15, 2008, 122 Stat. 4806.)

**§ 17812. Assessment of NASA laboratory capabilities**

**(a) In general**

NASA's laboratories are a critical component of NASA's research capabilities, and the Administrator shall ensure that those laboratories remain productive.

**(b) Review**

The Administrator shall enter into an arrangement for an independent external review of NASA's laboratories, including laboratory equipment, facilities, and support services, to determine whether they are equipped and maintained at a level adequate to support NASA's research activities. The assessment shall also include an assessment of the relative quality of NASA's in-house laboratory equipment and facilities compared to comparable laboratories elsewhere. The results of the review shall be provided to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than 18 months after October 15, 2008.

(Pub. L. 110-422, title X, § 1003, Oct. 15, 2008, 122 Stat. 4807.)

SUBCHAPTER X—OTHER PROVISIONS

**§ 17821. Initiation of discussions on development of framework for space traffic management**

**(a) Finding**

Congress finds that as more countries acquire the capability for launching payloads into outer space, there is an increasing need for a framework under which information intended to promote safe access into outer space, operations in outer space, and return from outer space to Earth free from physical or radio-frequency interference can be shared among those countries.

**(b) Discussions**

The Administrator shall, in consultation with such other agencies of the Federal Government as the Administrator considers appropriate, initiate discussions with the appropriate representatives of other space-faring countries to determine an appropriate framework<sup>1</sup> under which information intended to promote safe access into outer space, operations in outer space, and return from outer space to Earth free from physical or radio-frequency interference can be shared among those nations.

(Pub. L. 110-422, title XI, § 1102, Oct. 15, 2008, 122 Stat. 4808.)

**§ 17822. Astronaut health care**

**(a) Survey**

The Administrator shall administer an anonymous survey of astronauts and flight surgeons to evaluate communication, relationships, and the effectiveness of policies. The survey questions and the analysis of results shall be evalu-

<sup>1</sup> See References in Text note below.

<sup>1</sup> So in original. Probably should "framework".

ated by experts independent of NASA. The survey shall be administered on at least a biennial basis.

**(b) Report**

The Administrator shall transmit a report of the results of the survey to Congress not later than 90 days following completion of the survey.

(Pub. L. 110-422, title XI, § 1103, Oct. 15, 2008, 122 Stat. 4808.)

**§ 17823. National Academies decadal surveys**

**(a) In general**

The Administrator shall enter into agreements on a periodic basis with the National Academies for independent assessments, also known as decadal surveys, to take stock of the status and opportunities for Earth and space science discipline fields and Aeronautics research and to recommend priorities for research and programmatic areas over the next decade.

**(b) Independent cost estimates**

The agreements described in subsection (a) shall include independent estimates of the life cycle costs and technical readiness of missions assessed in the decadal surveys whenever possible.

**(c) Reexamination**

The Administrator shall request that each National Academies decadal survey committee identify any conditions or events, such as significant cost growth or scientific or technological advances, that would warrant NASA asking the National Academies to reexamine the priorities that the decadal survey had established.

(Pub. L. 110-422, title XI, § 1104, Oct. 15, 2008, 122 Stat. 4809.)

**§ 17824. NASA outreach program**

**(a) Establishment**

NASA shall competitively select an organization to partner with NASA centers, aerospace contractors, and academic institutions to carry out a program to help promote the competitiveness of small, minority-owned, and women-owned businesses in communities across the United States through enhanced insight into the technologies of NASA's space and aeronautics programs. The program shall support the mission of NASA's Innovative Partnerships Program with its emphasis on joint partnerships with industry, academia, government agencies, and national laboratories.

**(b) Program structure**

In carrying out the program described in subsection (a), the organization shall support the mission of NASA's Innovative Partnerships Program by undertaking the following activities:

- (1) Facilitating the enhanced insight of the private sector into NASA's technologies in order to increase the competitiveness of the private sector in producing viable commercial products.
- (2) Creating a network of academic institutions, aerospace contractors, and NASA centers that will commit to donating appropriate

technical assistance to small businesses, giving preference to socially and economically disadvantaged small business concerns, small business concerns owned and controlled by service-disabled veterans, and HUBZone small business concerns. This paragraph shall not apply to any contracting actions entered into or taken by NASA.

(3) Creating a network of economic development organizations to increase the awareness and enhance the effectiveness of the program nationwide.

**(c) Report**

Not later than 1 year after October 15, 2008, and annually thereafter, the Administrator shall submit a report to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the efforts and accomplishments of the program established under subsection (a) in support of NASA's Innovative Partnerships Program. As part of the report, the Administrator shall provide—

- (1) data on the number of small businesses receiving assistance, jobs created and retained, and volunteer hours donated by NASA, contractors, and academic institutions nationwide;
- (2) an estimate of the total dollar value of the economic impact made by small businesses that received technical assistance through the program; and
- (3) an accounting of the use of funds appropriated for the program.

(Pub. L. 110-422, title XI, § 1107, Oct. 15, 2008, 122 Stat. 4810.)

**§ 17825. Protection of scientific credibility, integrity, and communication within NASA**

**(a) Sense of the Congress**

It is the sense of Congress that NASA should not dilute, distort, suppress, or impede scientific research or the dissemination thereof.

**(b) Study**

Within 60 days after October 15, 2008, the Comptroller General shall—

- (1) initiate a study to be completed within 270 days to determine whether the regulations set forth in part 1213 of title 14, Code of Federal Regulations, are being implemented in a clear and consistent manner by NASA to ensure the dissemination of research; and
- (2) transmit a report to the Congress setting forth the Comptroller General's findings, conclusions, and recommendations.

**(c) Research**

The Administrator shall work to ensure that NASA's policies on the sharing of climate related data respond to the recommendations of the Government Accountability Office's report on climate change research and data-sharing policies and to the recommendations on the processing, distribution, and archiving of data by the National Academies Earth Science Decadal Survey, "Earth Science and Applications from Space", and other relevant National Academies reports, to enhance and facilitate their avail-

ability and widest possible use to ensure public access to accurate and current data on global warming.

(Pub. L. 110-422, title XI, § 1109, Oct. 15, 2008, 122 Stat. 4811.)

#### § 17826. Methane inventory

Within 12 months after October 15, 2008, the Director of OSTP, in conjunction with the Administrator, the Administrator of NOAA, and other appropriate Federal agencies and academic institutions, shall develop a plan, including a cost estimate and timetable, and initiate an inventory of natural methane stocks and fluxes in the polar region of the United States.

(Pub. L. 110-422, title XI, § 1111, Oct. 15, 2008, 122 Stat. 4811.)

#### § 17827. Exception to alternative fuel procurement requirement

Section 17142(a) of this title does not prohibit NASA from entering into a contract to purchase a generally available fuel that is not an alternative or synthetic fuel or predominantly produced from a nonconventional petroleum source, if—

- (1) the contract does not specifically require the contractor to provide an alternative or synthetic fuel or fuel from a nonconventional petroleum source;
- (2) the purpose of the contract is not to obtain an alternative or synthetic fuel or fuel from a nonconventional petroleum source; and
- (3) the contract does not provide incentives for a refinery upgrade or expansion to allow a refinery to use or increase its use of fuel from a nonconventional petroleum source.

(Pub. L. 110-422, title XI, § 1112, Oct. 15, 2008, 122 Stat. 4811.)

#### § 17828. Cooperative unmanned aerial vehicle activities

The Administrator, in cooperation with the Administrator of NOAA and in coordination with other agencies that have existing civil capabilities, shall continue to utilize the capabilities of unmanned aerial vehicles as appropriate in support of NASA and interagency cooperative missions. The Administrator may enter into cooperative agreements with universities with unmanned aerial vehicle programs and related assets to conduct collaborative research and development activities, including development of appropriate applications of small unmanned aerial vehicle technologies and systems in remote areas.

(Pub. L. 110-422, title XI, § 1116, Oct. 15, 2008, 122 Stat. 4813.)

#### § 17829. Development of enhanced-use lease policy

##### (a) In general

The Administrator shall develop an agency-wide enhanced-use lease policy that—

- (1) is based upon sound business practices and lessons learned from the demonstration centers; and
- (2) establishes controls and procedures to ensure accountability and protect the interests of the Government.

##### (b) Contents

The policy required by subsection (a) shall include the following:

- (1) Criteria for determining whether enhanced-use lease provides better economic value to the Government than other options, such as—

- (A) Federal financing through appropriations; or
- (B) sale of the property.

- (2) Requirement for the identification of proposed physical and procedural changes needed to ensure security and restrict access to specified areas, coordination of proposed changes with existing site tenants, and development of estimated costs of such changes.

- (3) Measures of effectiveness for the enhanced-use lease program.

- (4) Accounting controls and procedures to ensure accountability, such as an audit trail and documentation to readily support financial transactions.

(Pub. L. 110-422, title XI, § 1117, Oct. 15, 2008, 122 Stat. 4813.)

##### CODIFICATION

Section is comprised of section 1117 of Pub. L. 110-422. Subsecs. (c) and (d) of section 1117 of Pub. L. 110-422 amended section 2459j of this title.

### CHAPTER 156—HEALTH INFORMATION TECHNOLOGY

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Sec.

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